

IDENTIFICATION

Course code : ESI-SPI-CI-BE4-S7-UE3-EC2
ECTS : 1

DURATION

Lectures :	8
Tutorial classes :	8
Labs :	4
Total :	20

Project :
Personnal work :

ASSESSMENT

- In-class assignments - Homework assignments - Practical work

TEACHING MATERIALS

- Course and tutorial handouts - Past exam papers - In-house calculation tools

LANGUAGE

English

CONTACT

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UE : UE7-EFFI

COURSE : Cogeneration and Innovative Energy Systems

SCOPE OF THE COURSE

OBJECTIVES

Design and analyze complex energy systems

COMPETENCE AND SKILLS

Mastery of complex energy systems

PROGRAM

- Cogeneration and trigeneration systems
 - Work-producing cycles (gas turbine and steam cycle)
 - Tri-thermal cycles (absorption and adsorption)
 - Case study
- Comparison of different techniques

BIBLIOGRAPHY

- L. Borel Thermodynamics and Energetics
- M. Feidt. Energetics, DUNOD ISBN 2 10 049066 4
- Civil Engineering Treatise from the Swiss Federal Institute of Technology Lausanne, volume 21 : Energy Systems ISBN-13 : 978-2880744649

REQUIREMENTS

- Thermodynamics
- Refrigeration and heat production
- Fluid mechanics
- Heat transfer